a polymer resin body containing powder of high magnetic permeability, wherein said powder is uniformly distributed in the polymer resin body;

a plurality of squirrel cage conductor bars positioned around and embedded in the outer part of the polymer resin body and formed of material having high electric conductivity;

a plurality of axial slots, wherein said axial slots are formed between said cage squirrel conductor bars; and

cooling bodies inserted into the axial slots for dissipating heat generated in the composite squirrel cage rotor.

2.(Amended) The rotor according to claim 1, wherein said cooling bodies are heat pipes.

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3. (Amended) The rotor according to claim 1, further comprising an inner core of high magnetic permeability so as to increase the magnetic flux density of the rotor.

cont

4.(Amended) The rotor according to any of claim 1 to 3, wherein chopped fibers are added to said polymer resin body in order to enhance the mechanical properties such as thermal stability and stiffness of the rotor structures.

5. (Amended) A method for fabricating a squirrel cage rotor, said, rotor with a rotating shaft, a plurality of conductor bars, two end rings and a polymer resin part, comprising the steps of:

surrounding each of the conductor bars by a pair of jigs; inserting the ends of the conductor bars into the holes of end rings;

removing the jigs from each conductor bar;

curing a polymer resin part containing powder of high magnetic permeability while filling the cavity between the squirrel cage conductor and the mold cavity composed of two blocks; and

grinding the outer surface of composite squirrel cage rotor combined with squirrel cage conductor and the polymer resin part.

7. (New) The rotator according to claim 1, wherein said cooling bodies including isothermal cycling material therein.

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8. (New) The rotor according to claim 7, wherein said isothermal cycling materials are an ammonia, methanol and Freon.

9. (New) The rotor according to claim 2, wherein said heat pipes are sealed pipes.